

REMARKS

Claims 1-14 and 17-24 are all the claims pending in the application. Claims 1 and 21 have been amended based on, for example, page 11, lines 1-12 of the specification.

Entry of the above amendments is respectfully requested.

I. Response to Rejection of Claims 1-14 and 17-24 under 35 U.S.C. § 112, second paragraph

Claims 1-14 and 17-24 are rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite.

Applicants respectfully traverse the rejection.

It is respectfully submitted that one of skill in the art would understand the meaning and scope of the claim.

To meet the requirements of § 112, second paragraph, the claims must be sufficiently definite for one to reasonably determine their scope. MPEP § 706.03(d). As currently written, the limitations of claims 1-14 and 17-24 are definite. For example, claim 1 recites "a styrene-maleic acid anhydride copolymer having a molecular weight of 1400 to 10,000". The specification discloses that the molecular weight refers to the weight average molar mass or M_w at page 11, lines 1-12. Thus, it is submitted that one of skill in the art would be apprised of the scope of the invention and that the claims comply with §112, second paragraph.

Accordingly, withdrawal of the rejection is respectfully requested.

II. Response to Rejection of Claims 1, 2, 4-14, 17 and 19-24 under 35 U.S.C. § 103(a)

Claims 1, 2, 4-14, 17 and 19-24 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Ito et al. (US 4,690,856) in view of Kashahara et al. (US 4,421,892).

In addition, claim 3 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Ito et al. (US 4,690,856) in view of Kashahara et al. (US 4,421,892), and further in view of Applicants' alleged admissions.

Further, claim 18 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Ito et al. (US 4,690,856) in view of Kashahara et al. (US 4,421,892).

Applicants respectfully traverse the rejections.

Claim 1 is directed to a metal laminate comprising between two outer metal sheets an adhesive polymer layer, characterized in that the adhesive polymer layer comprises polyamide, a copolymer of ethylene and an unsaturated carboxylic acid and/or a derivative thereof and a reactive copolymer, comprising a styrene-maleic acid anhydride copolymer having a molecular weight of 1,400 to 10,000.

It is respectfully submitted that none of the cited art teaches nor suggests the claimed metal laminate. Specifically, there is no teaching or suggestion of a metal laminate comprising a styrene-maleic acid anhydride copolymer having a molecular weight of 1,400 to 10,000.

Ito relates to a metal laminate comprising a polyamide adhesive composition comprising polyamide and a polyolefin copolymer modified with an unsaturated compound, such as maleic anhydride. As acknowledged by the Examiner, Ito does not disclose a styrene-maleic anhydride copolymer having the claimed molecular weight. Thus, the Examiner relies upon Kashahara as making up for the deficiencies of Ito.

However, it is submitted that Kashahara does not make up for the deficiencies of Ito.

First, Kashahara does not disclose a styrene-maleic anhydride copolymer having a molecular weight in the claimed range. Kashahara discloses a thermoplastic polymeric material comprising A) a copolymer composed of a styrene copolymer having carboxylic acid anhydride radicals therein, having a molecular weight of 30,000 to 300,000 (*see* col. 7, line 36), and B)

polyamide chain moieties, both moieties being bonded to each other. In one embodiment of Kashahara, the styrene copolymer having carboxylic acid anhydride radicals therein is a styrene-maleic anhydride copolymer.

Second, Kashahara teaches away from a styrene-maleic anhydride copolymer having a molecular weight lower than 30,000. Specifically, Kashahara discloses:

"the styrene copolymers chain moieties have a molecular weight of 30,000, to 300,000... When the molecules weight of them is much lower, the preferable dispersion cannot be obtained and the moldings obtained will have an unfavorably decreased mechanic strength" (col. 7, lines 32-39);

"A thermoplastic polymeric material having good mechanical strength can be obtained only when the styrene copolymer has a composition and molecular weight as defined above and it is sufficiently reacted with a polyamide" (col. 7, lines 56-60); and

"in the production of the polymeric materials having a good dispersion state by use of melt kneading, the important factors are...the molecular weights of the hard copolymer" (col. 10, lines 62-67).

Based on the disclosure of Kashahara, one of ordinary skill in the art would not be motivated to reduce the molecular weight of the styrene-maleic anhydride copolymer. Accordingly, one of ordinary skill in the art would not arrive at the claimed invention.

In view of the above, it is submitted that a *prima facie* case of obviousness has not been established.

Furthermore, none of the cited art teaches or suggests the advantages related thereto as emphasized by the claimed metal laminate. That is, the claimed metal laminate exhibits very good adhesion properties along with excellent tensile modulus, even at elevated temperatures, and thermal stability. *See* page 10, lines 20-23 and Example 2 of the specification.

Thus, for at least the foregoing reasons, it is respectfully submitted that claim 1 is patentable over the cited art.


Further, claims 2-14 and 17-24 depend, directly or indirectly, from claim 1, and thus it is respectfully submitted that these claims are patentable for at least the same reasons as claim 1.

In view of the above, withdrawal of the rejections is respectfully requested.

Reconsideration and allowance of claims 2-14 and 17-24 is respectfully requested. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,


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